Jai Madhukar

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EDUCATION

Thapar Institute of Engineering & Technology   September 2022 – July 2026
B.Tech Computer Science & Engineering, CGPA 9.16   *Patiala, Punjab*

- **Coursework:** Data Structures, Design & Analysis of Algorithms, Database Management Systems, Operating Systems, Computer Networks, Software Engineering, Cloud Computing, Generative AI.

EXPERIENCE

InMobi   June 2025 – July 2025
Software Development Intern   *New Delhi, India*

- **Engineered SAHIT**, a scalable NGO-women matchmaking platform for **1,000+ users**, utilizing a 5-microservice architecture and **AI-powered RAG pipelines (LangChain, vector DBs).**
- **Designed real-time chat** with WebSockets and DB triggers, **reducing latency from 1.5s to 20-30ms.**
- **Improved API responsiveness by 97%** via Redis caching, **slashing endpoint latency from 1s to 30ms**; built a fault-tolerant help request pipeline using BullMQ.
- **Led end-to-end development** across **Next.js, Node.js, Postgres, Redis, AWS EC2**, implementing RBAC and admin workflows for InMobi's **Tech for Social Good** initiative.

Thapar Institute of Engineering & Technology   May 2024 – November 2024
Software Engineer Intern   *Patiala, Punjab*

- **Developed a scalable Hostel Management System** for **10,000+ users**, streamlining room allocation, facility, and complaint resolution.
- **Integrated 16 interactive 3D hostel** models (Blender, Three.js), enhancing spatial visualization and user navigation.
- **Built responsive user interfaces** (Next.js, Material-UI) for seamless interaction and enhanced user experience.

PROJECTS

Document Management Portal | Link | GitHub   May 2025
Next.js, JavaScript, MongoDB, Docker

- **Developed a proposal submission/tracking platform** for **200+ faculty and researchers** across university departments and **international institutions.**
- **Engineered upload-review workflows** and admin feedback loops, streamlining proposal management.
- **Architected a Next.js form builder and CMS** with MUI and MongoDB schema design, empowering non-technical admins to publish content updates.

LawVista | Link | GitHub   December 2024
LangChain, React, Express, Mongo, Pinecone, Django

- **Built an AI driven legal research engine** using a **RAG pipeline (LangChain, Pinecone)** for instant case summaries, document retrieval, and prior case lookup.
- **Implemented legal statute identification with 90% accuracy** and devised an explainable court judgment prediction system.

ACHIEVEMENTS

- **Overall Winner, JPMC Code for Good 2025:** Ranked 1st out of 50,000+ registrations.
- Won 10+ hackathons, including being a National Finalist, **Top 5** nationwide in Smart India Hackathon 2024.
- **2x Merit Scholarship Holder**, Thapar University, awarded to the top **10%** of students for academic excellence.

SKILLS

Languages: C, C++, JavaScript, TypeScript, SQL, Python, HTML/CSS
Frameworks/Tools: Next.js, React.js, Express.js, Node.js, Tailwind CSS, Redux, MongoDB, Prisma, PostgreSQL, Redis, VectorDB, Langchain, LLMs, BullMQ, Docker, Kafka, AWS, Git